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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/731,225

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Weidong Mao

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26291

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06/15/2005

MOSER, PATTERSON & SHERIDAN L.L.P.
595 SHREWSBURY AVE, STE 100
FIRST FLOOR
SHREWSBURY, NJ 07702

EXAMINER

USTARIS, JOSEPH G

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/731,225

Applicant(s)

MAO ET AL.

Examiner

Joseph G. Ustaris

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 November 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment dated 11 November 2004 in application 09/731,225.

The objection to the drawings and claims 19-21 are now withdrawn in view of the amendments.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 7, 8, 13, 14, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams (US006378130B1) in view of Gotwald (US005987518A).

Regarding claim 1, Adams discloses a full service network or "digital video television communication system" that includes a "headend" (See Fig. 1, element 2) "coupled to a two-way communication medium" (See Fig. 1, elements 3-5) "and at least one digital video set-top box coupled to said two-way communications medium" (See Fig. 1, element 6). The headend transmits on a "plurality of communication channels including in-band video channels" (See column 1 lines 60-65, column 2 lines 10-25, column 5 lines 1-20). The system also allows the users to send a request for a media asset from the set-top terminal or "digital video set-top box" to the headend or "sending

a channel resource request” (See Fig. 7), wherein the “channel resource request” indicates that the set-top terminal is ready to switch channels to receive the requested media asset or “video channel change at the set top box” (See Fig. 7). The headend then fulfills the request by finding the media asset and selecting a frequency associated with the server or “responsive to said channel resource request, selecting a selected communication channel” to transmit the data to the set-top terminal (See Fig. 7; column 10 lines 20-35). The headend also sends a reply message via IP datagrams or “sending a channel resource confirmation message” that tells the set-top terminal which frequency the data will be sent down or “identifying selected communication channel to set-top box” (See Fig. 7; column 10 lines 60-65). The set-top terminal proceeds to tune to that selected channel frequency or “selecting selected communication channel” (See Fig. 7; column 11 lines 8-20). However, Adams does not disclose that each of the FDM channels or “in-band video channels” includes “a plurality of multiplexed digital video channels and a plurality of data packets...for carrying IP over MPEG data packets”.

Gotwald discloses a method for communicating Internet Protocol (IP) data over a broadband MPEG channel. The system includes a multiplexing driver that multiplexes various MPEG2 streams, from various sources, onto each channel or “plurality of multiplexed digital video channels” (See Fig. 2; column 3 lines 40-56). The multiplexing driver also multiplexes IP data or IP datagrams, which has been encapsulated into a MPEG2 transport packets, onto each channel or “plurality of data packets...for carrying IP over MPEG data packets” where inherently MPEG2 data packets are identified by “packet ID (PID)” (See Fig. 2; column 4 lines 25-40). Therefore, it would have been

obvious to one with ordinary skill in the art at the time the invention was made to modify the full service network, IP data, and FDM channels disclosed by Adams to carry "a plurality of multiplexed digital video channels and a plurality of data packets... for carrying IP over MPEG data packets", as taught by Gotwald, in order to provide a low cost and efficient means of communicating IP data to the set-top terminal or "set-top box".

Regarding claim 2, the "selected communication channel" is identified within a reply message or "channel resource confirmation message" that is within a MPEG packet as taught by Gotwald, where inherently a packet ID (PID) would describe the contents of the MPEG packet (See claim 1 above).

Claim 7 contains the limitations of claim 1 (wherein the full service network includes a headend) and is analyzed as previously discussed with respect to that claim.

Claim 8 contains the limitations of claims 2 and 7 and is analyzed as previously discussed with respect to those claims.

Claim 13 contains the limitations of claim 1 (wherein the full service network includes a set-top terminal) and is analyzed as previously discussed with respect to that claim.

Claim 14 contains the limitations of claims 2 and 13 and is analyzed as previously discussed with respect to those claims.

Claim 19 contains the limitations of claim 1 (where inherently the headend and set-top terminal each have a "transmitter" and "receiver") and is analyzed as previously discussed with respect to that claim.

Claim 20 contains the limitations of claims 1 and 19 and is analyzed as previously discussed with respect to those claims.

Claim 21 contains the limitations of claims 1 and 19 and is analyzed as previously discussed with respect to those claims.

Claims 3, 9, 15, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams (US006378130B1) in view of Gotwald (US005987518A) as applied to claims 1, 2, 7, 8, 13, 14, and 19-21 above, and further in view of Banker et al. (US005497187A).

Regarding claim 3, Adams in view of Gotwald also discloses the use of out-of-band (OOB) tuners, where inherently the system full service network includes "an out-of-band region having at least one out-of-band communication channel" (See Adams Fig. 3, elements 42 and 43; column 5 lines 15-17). However, Adams in view of Gotwald does not disclose the use of the OOB channel as a "selected communication channel".

Banker et al. (Banker) discloses an In-band/out-of-band data transmission method for a television system. The system utilizes both the in-band and out-of-band to transport data to the terminals or set-top terminals or "selected communication channel...is and OOB channel". Inherently, when an OOB transmission method is used it is "identified in the channel resource confirmation message" as discussed in claim 1 above. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the full service network and reply message disclosed by Adams in view of Gotwald to utilize the OOB channel as the "selected

communication channel” and identify it within the replay message, as taught by Banker, in order to ensure that the data is delivered to the terminals by efficiently using all available resources.

Claim 9 contains the limitations of claims 3 and 7 and is analyzed as previously discussed with respect to those claims.

Claim 15 contains the limitations of claims 3 and 13 and is analyzed as previously discussed with respect to those claims.

Claims 22 and 23 contains the limitations of claims 2, 3, and 21 and is analyzed as previously discussed with respect to those claims.

Claims 4-6, 10-12, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams (US006378130B1) in view of Gotwald (US005987518A) and Banker et al. (US005497187A).

Claim 4 contains the limitations of claims 1 and 3 (wherein a “plurality of channels” inherently include a least two channels or “first and second in-band video channels” where each channel carries a “first/second plurality of multiplexed digital video channels and a plurality of data packets, each of the data packets being identified by a PID for carrying IP over MPEG data packets”) and is analyzed as previously discussed with respect to those claims. However, Adams in view of Gotwald does not disclose a channel resource request representing a “channel change from a multiplexed digital video channel in a first video channel to a multiplexed digital video channel in a second video channel” and “determining whether the second video channel has an

available communication channel” and “selecting the second video channel if second video channel has an available communications channel...and selecting a OOB channel...if second communication channel does not have an available communication channel”.

Adams in view of Gotwald discloses that the set-top terminal sends a “channel resource request” as discussed in claim 1 above. Official Notice is taken that it is well known that a “channel resource request” from the set-top terminal would change from one video channel to another video channel, where each channel carries multiplexed MPEG2 streams as discussed in claim 1 above. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system and request for media asset disclosed by Adams in view of Gotwald to represent a “channel change from a multiplexed digital video channel in a first video channel to a multiplexed digital video channel in a second video channel”, in order to provide more control to the user to what programs the user wishes to view.

Banker et al. (Banker) discloses an In-band/out-of-band data transmission method for a television system. The system utilizes both the in-band and out-of-band (OOB) to transport data to the terminals or set-top terminals. The system first determines if the load of the out-going in-band channels is great or not or “determining whether a second video channel has an available communication channel”. Inherently, the system selects an in-band channel if the load isn't great or “selecting the second video channel if second video channel has an available communications channel”, otherwise the system selects an OOB channel to transmit the data to the terminal or

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“selecting a OOB channel...if second communication channel does not have an available communication channel” (See column 8 lines 3-20). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the full service network and headend disclosed by Adams in view of Gotwald to “determine whether the second video channel has an available communication channel” and “selecting the second video channel if second video channel has an available communications channel...and selecting a OOB channel...if second communication channel does not have an available communication channel”, as taught by Banker, in order to provide a more expedient mode of transmission.

Claim 5 contains the limitations of claims 2 and 4 and is analyzed as previously discussed with respect to those claims.

Claim 6 contains the limitations of claims 3 and 4 and is analyzed as previously discussed with respect to those claims.

Claim 10 contains the limitations of claim 4 (wherein the full service network includes a headend) and is analyzed as previously discussed with respect to that claim.

Claim 11 contains the limitations of claims 5 and 10 and is analyzed as previously discussed with respect to those claims.

Claim 12 contains the limitations of claims 6 and 10 and is analyzed as previously discussed with respect to those claims.

Claim 16 contains the limitations of claim 4 (wherein the full service network includes a set-top terminal) and is analyzed as previously discussed with respect to that claim.

Claim 17 contains the limitations of claims 5 and 16 and is analyzed as previously discussed with respect to those claims.

Claim 18 contains the limitations of claims 6 and 16 and is analyzed as previously discussed with respect to those claims.

Response to Arguments

3. Applicant's arguments filed 11 November 2004 have been fully considered but they are not persuasive.

Applicant's arguments with respect to Tsutsui have been considered. However in retrospect, Adams does disclose a "channel resource request representing a video channel change at the set top box"; please see claim rejections.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, Banker discloses a method that maximizes the efficiency of data transfer through communication channels by monitoring and making adjustments to the transmission scheme. Adams discloses distributing media assets through communication channels of a network to the user. Therefore, one with ordinary skill

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would apply the method disclosed by Banker to the communications channels disclosed by Adams in order to maximize the efficiency of the communications channels.

Applicant is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion


4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph G. Ustaris whose telephone number is 571-272-7383. The examiner can normally be reached on M-F 7:30-5PM; Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S. Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JGU
June 2, 2005


VIVEK SRIVASTAVA
PRIMARY EXAMINER